DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service

Centers for Disease Control
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Atlanta GA 30333

TB Notes
No. 2, 2010

Dear Colleague:

Happy spring to all! Staff of the Division of Tuberculosis Elimination (DTBE) have kept up their usual busy pace; I will mention a few activities. On March 2-3, 2010, the Advisory Council for the Elimination of Tuberculosis (ACET) met in Atlanta. Dr. Hazel Dean, Deputy Director, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), reported that a new Office of Infectious Diseases has been created at CDC. This office will support infectious disease activities, and will house NCHHSTP plus two other national centers. Also, within NCHHSTP, the Global AIDS Program is transitioning into another new CDC entity, the Center for Global Health.

In my ACET report, I gave an update on DTBE staff deployed to H1N1 duties (please see the related item in this issue), and there were several reports on CDC's response to the earthquake in Haiti. I also discussed a recently developed mathematical model of TB trends, which shows that the most important determinant for TB elimination will be preventing the progression of LTBI to TB disease, especially in foreign-born persons. In an important study in Botswana, a trial of 6-month vs 36-month isoniazid preventive therapy (IPT) for HIV patients demonstrated that TB/HIV-coinfected persons receiving 36 months of IPT had a 92% reduction in progression to TB compared to those receiving only 6 months of IPT.

Other updates reflected the Division's focus on prevention and control of TB in high-risk populations such as immigrants and other foreign-born persons from high-burden areas, health care workers who work in high-risk settings, and TB patients with comorbidities such as HIV or diabetes. We also heard an update on a new DTBE laboratory service for rapid detection of drug-resistant TB.

Dr. Tom Navin and I both shared data on the unexpected decline in reported TB cases for 2009. The number of reported TB cases in the United States is at an all-time low, with 17 consecutive years of decline. However, racial/ethnic minority populations and foreign-born persons continue to account for a disproportionate percentage of TB cases. A number of explanations have been put forward to explain the decline, among them the recent economic recession. DTBE and the National TB Controllers Association are conducting surveys and studies regarding the decline and will report their findings later this year.

The 14th Annual Conference of the International Union Against Tuberculosis and Lung Disease (IUATLD), North American Region (NAR), convened March 11-13 in Orlando, Florida. The conference presented research on the diagnosis, treatment, and management of TB and HIV coinfection; provided a forum where attendees, which

included participants from Latin America, the Caribbean, and Haiti, could network with others; and provided participants an opportunity to exchange knowledge and expertise among those working in the HIV/TB field. I was honored to give the George W. Comstock lecture this year. This NAR meeting had a series of outstanding presentations covering a wide variety of topics, ranging from basic and laboratory sciences to practical challenges being addressed by TB control programs.

DTBE observed World TB Day through a number of activities and publications. DTBE's World TB Day website (http://www.cdc.gov/tb/events/WorldTBDay/default.htm) is updated each year with tools, graphics, and other resources for TB programs planning their World TB day activities. The *Morbidity and Mortality Weekly Report (MMWR)* of March 19 (http://www.cdc.gov/mmwr/PDF/wk/mm5910.pdf) included several items developed by DTBE staff. These included a front-page message box about World TB Day, plus several articles: Decrease in Reported Tuberculosis Cases, United States, 2009; Monitoring Tuberculosis Programs --- National Tuberculosis Indicator Project, United States, 2002–2008; and Launch of TB Genotyping Information Management System (TB GIMS).

On March 24, DTBE hosted an observance at CDC's Global Communications Center at the main Roybal campus. This event was preceded by a well-attended tour and open house conducted by the Mycobacteriology Laboratory Branch (please see the related article in this issue) and was followed by a reception that was sponsored by the American Lung Association in Georgia.

Dr. Tom Frieden, CDC Director, gave a great keynote presentation, and we were also honored to have Dr. Margaret Chan, Director General of the World Health Organization (WHO), as a speaker. Other outstanding remarks were provided by Dr. Janet Collins, CDC Associate Director for Program, and Dr. Kevin Fenton, Director, NCHHSTP.

On Saturday, March 27, DTBE and partners held the fourth annual TB Awareness Walk. In addition to increasing awareness about TB, this popular event allows us to gather in a more informal setting with family and friends to enjoy music and entertainment and take a 2-mile walk around Grant Park in Atlanta.

I was most appreciative of all the efforts contributing to this very successful series of events around World TB Day. I hope all of you were also able to gain support and visibility for your ongoing efforts through your World TB Day activities.

I hope to see all of you who are working so successfully to prevent and control TB in the United States at the 2010 National TB Conference in June here in Atlanta.

Kenneth G. Castro, MD

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TB Notes

Centers for Disease Control and Prevention
Atlanta, Georgia 30333
Division of Tuberculosis Elimination ♦
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

No. 2, 2010

HIGHLIGHTS FROM STATE AND LOCAL PROGRAMS

Los Angeles County Collaborates with Private Medical Community to Present Symposium on Public-Private Partnerships to Control TB

In honor of World TB Day 2010, on March 24 the Tuberculosis Control Program (TBCP) and Community Health Services (CHS)[1] of the Los Angeles County (LAC) Department of Public Health (DPH) collaborated with a consortium of private hospitals in a high tuberculosis (TB) incidence area of LAC known as the San Gabriel Valley. Together they presented an educational symposium targeting the private medical community, entitled "*Public Health and the Private Medical Community: Partnering Together to Control TB in LAC*."

In the photo are two of the symposium attendees: Dr. Joseph Kuei, Pulmonologist, Garfield Medical Center, Monterey Park, with Dr. Frank Alvarez, Director, TB Control Program, Los Angeles.

In 2008, the San Gabriel Valley, also known as service planning area (SPA) 3, reported the second highest number of TB cases compared to the other seven SPAs that make up LAC. The main purpose of the event was to strengthen the ongoing relationship with private medical doctors (PMDs) in the co-management of TB patients. The symposium covered TB epidemiology, the reporting and discharging of TB patients, the partnership between the private and public sectors in controlling TB, and updates on TB diagnosis and treatment. Attendees were offered 2 hours of continuing education credits.

The symposium was held at Garfield Medical Center, a private hospital within SPA 3 that reported 13 TB cases in 2008, which made it the second highest TB-reporting private facility in SPA 3 for 2008. Of the six speakers at the conference, there were two physicians and one nurse manager from the TBCP, one physician and one public health nurse from CHS, and one PMD from Garfield Medical Center.

The event attracted 54 participants, including 18 physicians and 30 nurses, most of whom responded very positively about the event on their evaluations. In fact, over 90% of the participants felt that all objectives were fully met. There was also a 13.4% increase in provider knowledge based on the completion of pretests and posttests. The anticipated outcome is that participation in this event, and the resultant increase in private provider knowledge and understanding, will translate into greater collaboration between the public and private sectors in the co-management of TB patients, as well as an improvement in TB treatment completion rates.

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Visit DTBE's Internet home page,
http://www.cdc.gov/tb,
for other publications, information, and resources available from DTBE.

In addition to the World TB Day symposium, Dr. Frank Alvarez, the TBCP Director and LAC TB Controller, wrote an article that appeared in various publications, including the Hospital Association of Southern California (HASC) newsletter[2] and the LAC DPH's *Rx for Prevention*.[3] The target audience and main readership for these newsletters is the private medical community.

In order to spread the message of the importance of public-private partnerships to an even wider audience, Dr. Alvarez participated in a statewide media call on March 23, which also included a representative from the World Health Organization, the TB Controller for the state of California, and a former TB patient who has become a patient advocate. This media call was organized and sponsored by the California TB Controllers Association (CTCA) and Breathe California.

Along with the media call, the TBCP Assistant Medical Director, Dr. Steven Hwang, was interviewed and quoted in an article that focused on drug-resistant TB. This article appeared in *The Sun*.[4]

Finally, press releases were issued and distributed by the LAC DPH and key community partner, the American Lung Association in California (ALAC). Articles that resulted from these press releases appeared online in *USA Today*,[5] *India Times*,[6] *The Medical News*,[7] and *Earth Times*.

—Reported by Chhandasi Pamina Bagchi, MPH, and Robert Miodovski, MPH
Los Angeles County Tuberculosis Control Program

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Philadelphia TB Control Program Collaboration and Service Integration

Program Collaboration and Service Integration (PCSI) is an important initiative of CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP). As defined by CDC, PCSI is a mechanism of organizing and blending interrelated health issues, separate activities, and services in order to maximize public health impact through new and established linkages between programs to facilitate the delivery of services. Since 2006, CDC has assessed the amount and types of PCSI activities occurring among funded programs in the U.S. and monitored internal progress on commitments and activities, and the effect these activities have had in the field.

This report assesses the structure of the Philadelphia Department of Public Health (PDPH) TB Control Program to support PCSI activities; describes strategies used to increase the participation in PCSI activities; inventories efforts to increase these activities within the TB Control Program; and reviews the overall progress of PDPH toward CDC goals for PCSI.

The PCSI activities described in this field report are important aspects of TB Control Program Services and Evaluation activities. These activities support and strengthen core components described in the "Essential Components of Tuberculosis Prevention and Control Programs" (www.cdc.gov/mmwr/preview/mmwrhtml/00038823.htm). The TB control program components deriving the greatest benefits from PCSI activities include the management of persons who have or are suspected to have TB disease, the identification of persons infected with *M. tuberculosis* through the expansion of TB skin testing of high-risk groups, increased laboratory and diagnostic services including HIV testing and counseling, data collection and analysis through the sharing of information, program evaluation, and training and education of health-care providers and members of the public health community.

The existing structure of PDPH supports PCSI activities in many ways. The PDPH TB Control Program Manager also serves as the overall administrative manager for PDPH Division of Disease Control (DDC). In addition to the TB Control Program, the DDC also manages the city's STD, Viral Hepatitis, Public Health Emergency Preparedness, and Public Health Epidemiology Programs, among others. As a result, there are already a number of interrelated activities between TB Control and other DDC units. This organizational structure provides coordinated management and removes some barriers to service integration. This is important in that it allows programmatic decisions among DDC units to be made internally, avoiding delays encountered by the need to coordinate policies at the Division level within PDPH.

An early DDC strategy was the formation of the HIV/TB/Hepatitis/STD Integration Workgroup. The Integration Workgroup was convened by the PDPH/DDC in response to CDC's July 2007 green paper, "Program Collaboration and Service Integration: Enhancing the prevention and control of HIV/AIDS, Viral Hepatitis, STD, and TB in the United States." The Integration Workgroup is coordinated by the Pennsylvania/Mid-Atlantic AIDS Education and Training Center; the TB Control Program has been an active part of the workgroup since its inception in May 2008. Early on, the Integration Workgroup performed an assessment of the four programs to gauge the degree to which prevention services between them met CDC guidelines. Following the assessment, the workgroup developed an initial inventory of collaboration and service integration and has begun efforts to expand prevention services across the four programs. The Integration Workgroup also tracks program-

related activities and monitors progress toward CDC's PCSI goals and objectives.

The TB Control Program has recently inventoried its own efforts to increase PCSI activities within the program services and evaluation units. This inventory of activities is provided below.

What are the common target populations? Along with the AIDS Activities Coordinating Office (AACO) and Hepatitis Program, we target homeless persons, correctional facility inmates, residents of long term care (LTC) facilities, recent immigrants and refugees, and persons with chemical and substance abuse issues. TB Control outreach and targeted testing programs in LTC facilities, in correctional facilities, and throughout the homeless shelter network have led to early detection and prevention of TB cases in these populations. The Integration Workgroup has brought together PDPH programs serving these vulnerable populations to share strategies for providing population-based services and intervention programs.

What are your current collaborative efforts/activities? In terms of the provision of integrated services, we currently provide HIV rapid screening and hepatitis B/C screening for all TB patients at the Flick Clinic. Our goal is to ensure that all newly diagnosed TB cases and patients with LTBI are counseled and tested for HIV and referred for HIV services if found to be HIV infected. TBC also supports HIV providers' efforts to test HIV-infected patients for TB.

The TB Control Program has worked through the Integration Workgroup to strengthen and maintain an ongoing relationship with AACO. We currently conduct at least annual TB and AIDS registry matches to ensure completeness of reporting of HIV and TB coinfected patients to both surveillance systems. For example, TB Control is able to obtain current HIV status on TB cases and suspects and share information related to AIDS-defining conditions identified through our clinical assessments.

What trainings have taken place so far? The PDPH TB Control Program has provided TB in-service and updates to the Inventory Workgroup, AACO HIV service providers, and Philadelphia's Office of Addiction Services addiction counselors during the past year.

Are there any issues, restrictions or barriers related to funding, surveillance, or training that hinder integration? During our TB Cooperative Agreement (CoAg) application process, we received guidance memoranda from CDC's Procurement and Grants Office (PGO) advising programs on the limitations of redirecting TB CoAg funds and supported personnel to other activities. PDPH TB Control assumes many of these restrictions may also apply to PCSI activities in Philadelphia. There are also state and local regulations and restrictions on the use of program funds.

Are any funds shared or used to support other related prevention programs for HIV, STD, TB, and Hepatitis (i.e., personnel, testing, and training)? This is limited to the administrative and structural integration that DDC provides to each of the programs and the PCSI initiatives that DDC funds.

What reporting systems are being utilized? There are no common reporting systems currently being utilized by PDPH programs. Pennsylvania's version of the National Electronic Disease Surveillance System (PA-NEDSS) may have potential as a common reporting system.

How are partner services delivered? Partner services continue to be program-specific activities and are not conducted in an integrated fashion. Referrals for HIV and hepatitis services are made at the point of service for TB program patients.

During the past year, PDPH TB Control has achieved an expanded level of TB program collaboration and service integration as defined by CDC. Service integration across CDC-funded programs based on risk assessment has been met, and there are few program-specific opportunities for collaboration that haven't been identified and explored by TB Control and the Integration Workgroup, thus far.

In the future, it may be a bit more difficult to achieve comprehensive integration, which is defined as a single package of prevention, diagnosis, and treatment activities integrating HIV, STD, viral hepatitis, and TB services, with linkage and/or referral to a specialist or other prevention services. With the continued support of PDPH/DDC, the Integration Workgroup will continue to meet and work to expand these activities in the coming years.

—Reported by Daniel P. Dohony, MPH
Div of TB Elimination
PHA, Philadelphia TB Control Program

Adoption of the Cohort Review in Miami

Overview
The staff of the Miami-Dade County TB Control and Prevention Program (hereafter referred to as the Miami TB program) provide medical, clinical, diagnostic, and treatment services at three sites: the Downtown Family Medical Center, the Little Haiti Medical Center, and the West Perrine Health Center. Each staff member of the Miami TB program plays an important role, with all working together to control TB. The senior public health advisor (PHA) in Miami was concerned that the program was not running as efficiently as it could be. He was familiar with the cohort review process and believed it could help bridge the gaps needed to overcome programmatic barriers.

The senior PHA was dedicated to the idea of adopting the cohort review process. He knew that if he could also gain the full support and commitment of TB program management, it would smooth the way for implementation of this process. After about a year of continuously reinforcing the goals and objectives of the program, he was able to show the need for cohort review, and thereby gained their commitment.

While serving as a TB PHA in Philadelphia, I had developed the skills and abilities needed to facilitate the cohort review. In August of 2009, I transferred from the Philadelphia TB control program to the Miami TB program. The Miami senior PHA and I partnered together to conduct the first cohort review in Miami, Florida.

Process
Cohort review is an evaluation method used by TB control programs to monitor and evaluate program performance. This method is an organized review of patients with TB disease and their contacts. The senior public health advisor at the Miami TB program wanted to implement this method as a way of ensuring accountability and improving case management and prevention. The process would also allow staff to see both weaknesses and strengths in the program.

My role in the Miami cohort review process began with a clear list of objectives and goals outlined by the program manager. The program manager reviewed actual CDC national objectives and Florida state objectives to be sure that Miami-Dade county objectives were realistic. He was committed to the process and ensured that all staff in the program were aware of the reasons for adopting and implementing the cohort review.

Our next step was to compile the list of cohort TB cases that were counted in the first quarter of 2009 (all TB cases in January, February, and March 2009). This list of 39 cases was generated from the data collected in the Health Management System (HMS) used by the TB program.

In order to ensure that consistent information is presented on each case, a standardized cohort review form was needed. During the presentation, demographic information, sites of disease, treatment regimen, status of treatment completion, and contact investigation information on each case would be presented by staff. I modified a cohort review form provided by the Philadelphia TB control program to ensure that all pertinent information of the Miami TB program would be available and addressed at the cohort review presentation.

Preparation also included weekly meetings between me, the senior public health advisor, and field staff supervisors. During the meetings, we practiced by discussing specific data elements for each case and ensuring that all information on the cohort form was complete and correct. Since this was a completely new process for the staff, we wanted to be sure that supervisors were familiar with the cohort review presentation process. This would allow them to confidently practice with field staff members and to help those presenting cases to be prepared. Additionally, meetings were arranged with nurse case managers and the surveillance team to ensure that all team members played an integral role in the cohort review process.

Outcomes

The analysis of cohort review outcomes was presented at the end of the cohort review session. Below are some of the results as they relate to program objectives:

- Index of treatment completion at the time of cohort review: 50%
- Index of completion: 93.8%
- Overall contact index: 6
- Percent of smear-positive cases with contacts identified: 100%
- Percent of contacts of smear-positive cases evaluated: 97.5%
- Percent of contacts of smear-positive cases started on treatment for LTBI: 61.2%
- Demographic and medical data were also collected, including patient HIV test status: Positive – 6; negative – 17; unknown – 1; not offered – 8; refused – 7.

Conclusions

The cohort review process is a tool that can be used to help ensure that a TB control program is working at its highest performance level possible. The outcomes may reveal that strategies and practices that have been the norm are no longer in place or are in need of modification. During this cohort process it was evident that follow-up was needed on some issues.

Increasing the number of TB patients offered HIV testing is a top priority. The cohort data showed eight individuals were not offered the HIV test and all were between the ages of 19 and 45. In 2005, CDC reported that approximately 9% of all TB cases, and nearly 16% of TB cases among persons aged 25 to 44, were occurring in HIV-infected persons.[1] In 2007, approximately 20% of TB patients in Miami-Dade County were co-infected with HIV. TB continues to be the leading cause of disease for those infected with HIV. TB program staff must consistently provide information and education about HIV and, most importantly, offer testing to all individuals.

Contact investigations are a key part of the program's goal to eliminate TB. By improving interview skills and conducting re-interviews, our overall contact index can increase. The field staff members who interview patients should remember to build rapport with the patient and ensure privacy when soliciting contact information. Follow-up interviews should be conducted by the medical staff in all clinics as an extension of the original interview to facilitate identification of additional contacts.

The surveillance team expressed a need for increasing partnerships and communication with private physicians and hospitals that manage TB cases in the Miami area. Many health

professionals in the community have little understanding of patient risk factors and of screening and treatment protocols. Cultural competency is extremely important in a city as diverse as Miami. In the future, we may see an increase in the early diagnosis of TB and treatment completion rates if we can successfully gain support and raise the awareness of private physicians and hospitals in the community.

Overall, the Miami-Dade County TB Control and Prevention Program has reached a significant milestone with the adoption of the cohort review. We have an ongoing commitment to the process. The 2nd quarter 2009 Cohort Review was held on January 22, 2010.

—Reported by Cindy Castaneda
Div of TB Elimination
PHA, Miami-Dade TB Control Program

Reference

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DTBE Staff Respond to the 2009 H1N1 Flu

Between April 25, 2009, and February 27, 2010, forty-two Division of Tuberculosis Elimination (DTBE) staff were reassigned from their regular TB duties to respond to the 2009 H1N1 flu. Their cumulative contributions totaled approximately 1,000 days of H1N1 work. A big thank you is due, not only to these 42 staff, but also to their colleagues who, in their absence, took on additional work to prevent lapses in DTBE's mission.

Soon after the novel H1N1 influenza virus was detected in mid-April 2009, CDC activated the Emergency Operations Center (EOC). Numerous DTBE staff were subsequently assigned to work in the EOC in April through June 2009, including the DTBE director, other senior leadership, and Atlanta-based staff from six branches. Staff from the Mycobacteriology Laboratory Branch helped provide surge support to other laboratories in CDC's Coordinating Center for Infectious Diseases. Other DTBE epidemiologists were deployed to investigate outbreaks in Mexico, Chicago, and Delaware, and to support H1N1 surveillance in Thailand. In addition, numerous field staff from the Field Services and Evaluation Branch were deployed to help staff CDC Quarantine Stations or reassigned to work in local public health emergency operations units.

A second phase of DTBE's H1N1 flu response began in August 2009, when CDC Director Thomas Frieden directed all employees to consider pandemic H1N1 response to be the agency's top priority. DTBE's primary obligation to the EOC over the subsequent 6 months was to continuously staff the Medical Care and Countermeasures Task Force, a clinically oriented group whose emphasis was guidance for healthcare institutions and providers. Thirteen DTBE medical officers rotated through the EOC and worked, for example, to facilitate emergency access to antiviral medication for seriously ill individuals.

As the H1N1 vaccine became available in November 2009, DTBE public health advisors were deployed to California, Kansas, and New Mexico to assist with vaccine distribution. Another DTBE epidemiologist was detailed to analyze national utilization data during the intensive November–December 2009 vaccine uptake phase.

As the 2009–2010 flu season appears to be tapering off in the United States, public health staff are encouraged to remain vigilant and informed about current trends. Vaccination remains our best protection against both seasonal and 2009 H1N1 flu.

Make it your practice to get vaccinated each fall. The 2010–2011 U.S. influenza vaccine will confer protection against A/California/7/2009-like (2009

H1N1), A/Perth/16/2009-like (H3N2), and B/Brisbane/60/2008-like (B/Victoria lineage) viruses. You can also take everyday actions to stay healthy. Wash your hands often with soap and water, and avoid touching your eyes, nose, and mouth. To protect others, cover your nose and mouth with a tissue when you cough or sneeze. And stay home if you are sick!

—Submitted by Maryam Haddad and Heather Duncan Div of TB Elimination

UPDATES FROM TB EDUCATION AND TRAINING NETWORK

TB ETN Member Highlights

In this issue we highlight Sheanne Allen, Ashley Ewing, Caroline Carman, and Gail Denkins, who have been selected as the new 2010 TB ETN Steering Committee members.

Sheanne Allen, BS, CHES, is a TB Education Promotion Consultant for the Washington State TB Program. Her job responsibilities are planning, organizing, and coordinating the surveillance activities of the Washington State TB Program. In this position, she assists in compiling, analyzing, and reviewing cohort, genotyping, and ARPE (Aggregate Reports for TB Program Evaluation) surveillance data. She provides liaison with TB program and statewide partners; provides TB program consultation to local health jurisdictions (LHJs), health agencies, and related organizations regarding surveillance activities; plans, develops, and monitors consolidated contracts with LHJs; prepares and monitors federal grant applications; and plans, organizes, and coordinates statewide TB training and education initiatives. She joined TB ETN to enhance her TB training and education knowledge, and to build a network base for future TB projects and initiatives.

Caroline Carman, MSW, LISW AP/CP is a licensed independent social worker who is the South Carolina Social Work Consultant for Tuberculosis. She received her BA in sociology and masters degree in social work (MSW) from the University of South Carolina. Caroline's job responsibilities are to address psychosocial needs of patients, provide education and material about TB for patients and the community, serve as the legal liaison for the division, serve as the TB Training Focal Point, facilitate the development of the Human Resource Development Plan, and assist in implementing the Plan. As a member of TB ETN, Caroline was an active member of the former Cultural Competency Workgroup and looks forward to her work on the TB ETN Steering Committee.

Gail Denkins, RN, BS, is a TB Nurse Consultant with the Michigan Department of Community Health. Gail is currently the TB Program Evaluation focal point. Her responsibilities include writing the program evaluation plan and overseeing its progress. In addition, she will be implementing a cohort review process for the state. Prior to this assignment, she was the TB Education focal point for 6 years. Gail is proud of the Michigan TB Nurse Network and the 2009 TB Nursing Certification Project for Michigan (please see Gail's recent TB Notes article on the nursing certification project at www.cdc.gov/tb/publications/newsletters/notes/TBN_1_10/tbetn_update.htm#2). She would like to see TB ETN assist and guide new members with integrating education and program evaluation as shared goals in TB programs.

Ashley Ewing, BS, serves as an Education and Training Coordinator with the North Carolina TB Control Program. Her job responsibilities include planning, organizing, and implementing TB health education programs for public health personnel, private providers, and other health care providers as requested; assessing health education plans and modifying as required to meet program goals and objectives; serving as

liaison to local health department nurses for education and training opportunities; conducting program planning and evaluation; and developing a working relationship with DTBE. Ashley joined TB ETN because she thought it would be a great way to learn about TB from the perspective of a health educator versus that of a health care provider. She also joined to learn about methods for developing effective educational tools for both providers and patients.

If you'd like to join Sheanne, Caroline, Gail, and Ashley as a TB ETN member and take advantage of all TB ETN has to offer, please send an e-mail requesting a registration form to tbetn@cdc.gov. You can also send a request by fax to 404-639-8960 or by mail to TB ETN, CEBSB, Division of Tuberculosis Elimination, CDC, 1600 Clifton Rd., N.E., MS E10, Atlanta, Georgia 30333 or, if you would like additional information about the TB Education and Training Network.

—Reported by Regina Bess
Div of TB Elimination

Program Highlight: Innovative Strategies Lead to Success in TB Control in a Crack Cocaine–Using Community

A TB team working in a traditionally low-incidence area successfully applied a systematic approach to developing strategies used to treat latent TB infection (LTBI) in a crack cocaine–using community.

Background

When a TB outbreak occurred in the Alberni Valley on the west coast of Vancouver Island in British Columbia, the newly formed TB team was challenged to develop effective management strategies. Social networking analysis identified the crack cocaine–using community as a key focus in transmission. In the course of the outbreak, 74% of the active TB cases were in persons associated with this community. Providing treatment of LTBI within this community was identified as a priority for outbreak management. However, reaching and involving this community in treatment was proving to be a significant challenge: By the end of the first year of the outbreak, only one person associated with the crack cocaine–using community had been placed on LTBI treatment.

Crack Cocaine as a Risk Factor

A literature review identified an emerging body of evidence associating crack cocaine use with active TB disease. Several conditions attached to use of crack cocaine increase the risk of transmission of this disease. These include "prolonged sharing of closed and confined airspace, intensive coughing, and other acute pulmonary complications of crack cocaine inhalation" (Story, 2008). Other social factors that influence outcomes in this group include inadequate access to health centers, noncompliance once access is obtained, and an environment of pervasive drug use and homelessness (Leonhardt, 1994). Finally, prolonged cocaine use and associated malnutrition can lead to immunosuppression as well as respiratory damage, which may predispose users to infectivity. (Story, 2008)

Needs Assessment

A needs assessment was informally crafted to identify barriers to treatment of LTBI. It focused on TB clients, physicians and other caregivers, the local TB team, and documentation. Data collection methods included self-report, informal interviews, written communications, and chart reviews. The needs assessment identified gaps in knowledge, communication breakdowns, logistical problems, and challenges related to homelessness and addiction behaviors.

Objectives & Activities

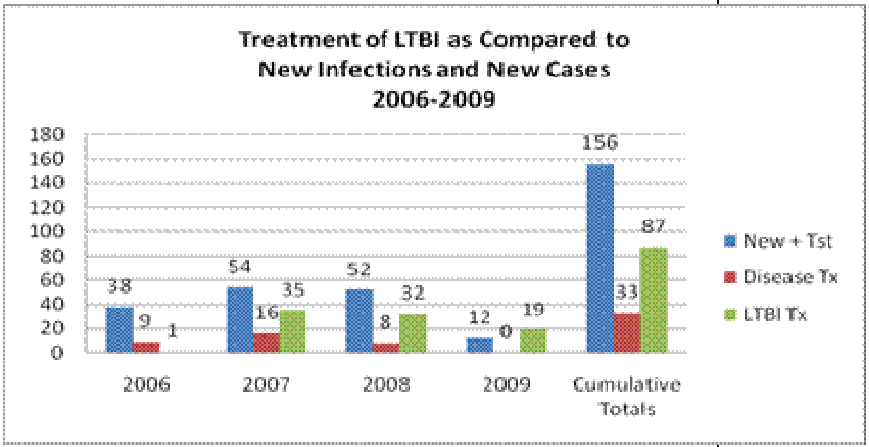
A multipronged strategy was developed to address the identified needs. Objectives and activities are summarized in the table on the following page.

OBJECTIVES	ACTIVITIES
1. Caregivers will understand the importance of LTBI treatment within the crack cocaine community	In-services for physicians, nurses, and outreach workers
	Distribution of a quarterly physician newsletter with TB updates
	Development of local protocols
	Daily team meetings to plan and review work
	Identification of better communication lines with Provincial TB Control to ensure that they are fully aware of individual client risk factors
2. Persons in the crack cocaine–using community will understand the importance of treatment for LTBI	Letters delivered to crack houses
	Peers used to transmit messages around TB screening and treatment
	Media used to convey messages around treatment of LTBI
	Identification and utilization of more effective educational tools
3. Clients will understand that flexible treatment plans and incentives are available	Clients allowed to choose treatment options that best suit their needs
	Clients allowed to choose incentive options that best assist them during the treatment period
	Information sheets distributed at key locations used by the target group
	Business cards distributed with basic messages, contact numbers, and locations
4. The wider community will be aware of the risks of TB disease for crack cocaine users	Community workshop
	Educational sessions for every agency working with the target group
	Media messaging
5. Trust will be established between physicians, TB team, and clients	TB nurses expanded their scope of practice to support clients with issues not directly related to TB
	Physician hired to serve clients without a family physician
	Incentives integrated into the program
	Template developed for physician communication to request LTBI treatment and outline management plans
	Monthly updates sent to physicians
	Neighborhood “yard parties” set up for screening and relationship-building
	Workers providing direct observed therapy expanded their role to include assisting with finding housing and connecting clients to other service agencies, including addictions counselors
	Team expanded to include a First Nations Cultural coordinator who accessed programming for cultural safety

Evaluation

Three levels of evaluation were applied: process, outcome, and impact. The process evaluation showed successful implementation with appropriate mid-stream adaptations based on ongoing team evaluation of the effectiveness of the strategies. Positive community engagement occurred on multiple levels. Outcome evaluation underlined the success of the strategies in that after December of 2008 there were no new cases of TB from within the crack cocaine using community. The impact was reflected in

observed behaviour changes as both the target community and the health care providers engaged in the treatment of LTBI within the crack cocaine using community. By February 2010, a total of 87 individuals from within this community had been placed on treatment for LTBI. This represented 56% of the infected population.



Lessons Learned

The team gleaned a number of lessons from their experience:

- Working successfully with populations with addictions requires unconventional approaches, innovation, and flexibility.
- Partnerships with primary care providers and other service agencies are necessary and can be highly effective.
- An education plan needs to be multifaceted, community-based, and adaptable.
- Educational programming is successful when it addresses identified needs.
- TB management can be powerfully influenced by effective educational programming.

Vancouver Island Health Authority TB team, March 2008.

This project was implemented in partnership with Nuu chah nulth Community Health Nursing.

—Submitted by Janice Jespersen
Clinical Coordinator
Port Alberni TB Program
Vancouver Island Health Authority

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TB ETN's Ask the Experts

I am developing an ongoing TB update and training for our local hospital providers: physicians, nurses, and medical assistants. Our providers range in age from 18 to 69. I know if I do something on the web I might lose the older ones, and if I provide lectures on a regular basis, I could lose the younger ones. Can you help me?

This is a very interesting dilemma for many people. In your case, not only are you dealing with different generations, but also with different levels of knowledge and education. This is quite a challenge!

So that everybody is on the same page, let us start by defining some terms. Numerous books and articles have characterized different generations into cohorts born during several time periods, with the members of each cohort sharing key societal experiences (e.g., historic events and economic circumstances) when they were all about the same age. Each of these generational groups also generally share common beliefs and behaviors throughout their lifetimes. A recent study by The Sloan Center on Aging and Work at Boston College (Research Highlight March 2009; agework@bc.edu) divided study subjects into the following generational cohorts:

- Generation Y, or Millennials, or Generation Next, or Generation Net: born after 1980 (age 29 or under in 2010)
- Younger Generation Xers: born 1972 to 1980 (age 30-38 in 2010)
- Older Generation Xers: born 1965-1971 (age 39-45 in 2010)
- Younger Boomers: born 1955-1964 (age 46-55 in 2010)
- Older Boomers: born 1946 to 1954 (age 56-64 in 2010)
- Traditionalists, or Matures, or Silents: born before 1946 (65 or older in 2010)

Using these groupings, they made many different comparisons and came up with some interesting differences and similarities about experiences in the workplace. Unfortunately, they did not address the topic of learning styles or training preferences.

Faculty in the Effective Teaching and Learning Department of Michigan's Baker College have addressed the topic of "Teaching Across Generations" by developing a list of approaches that will generally work with a multi-generational group in a training session (http://www.mcc.edu/pdf/pdo/teaching_across_gen.pdf). A few suggestions pertinent to your question include the following:

- Ask Boomers and Xers to share professional experiences pertinent to the topic
- Tap into the technological savvy and interest of Xers and Millennials
- Change activities often – the attention span of a typical adult is only 15-20 minutes
- Require participation in some form during the session
- Through practice, find the right mix of guidance and structure for all participants
- Encourage discussion
- Provide feedback and encouragement; recognize excellent performers individually

Very little research has been done specifically about how best to teach multi-generational groups, but many authors have a variety of opinions. An excellent literature review asking the question, "Do generational differences matter in instructional design?" was recently published on-line by Professor Thomas C. Reeves of the University of Georgia (http://it.coe.uga.edu/itforum/Paper104/ReevesITForumJan08.pdf). Some suggestions from this review, although not always based on research, include:

- Begin with an orientation about what will be covered
- Assess what learners know at the beginning of the class
- Continually reinvent your training as you teach the same materials again and again
- Communicate where to turn for answers
- Don't just train the what, train the why
- Keep training fun, interactive, and engaging
- Make sure the setting is comfortable
- Pay attention to the learning styles of the different generations represented
- Be sure the training has real substance

Although there is a plethora of books and articles about generational differences, most of the information is based on surveys of college students and "knowledge workers." Race, ethnicity, culture, and socioeconomic status are

variables that are often ignored. Thus, the results of studies that have been done may not be generalizeable to the wider population of people employed in today's workplaces. It is also very important not to apply generalizations about groups to individuals, which is why assessing your audience each time you teach is key.

Finally, students always respond positively to an engaged, energetic, and interested instructor. Regardless of the methods you choose to reach your learners, if you are passionate about the subject matter and genuine in wanting the participants to learn what you have to teach them, you will be successful.

—Submitted by Marguerite Jackson, PhD, RN, FAAN
Formerly Director of Education, Development & Research, U.C. San Diego Medical Center and Director, Administrative Unit, National Tuberculosis Curriculum Consortium, UCSD School of Medicine, San Diego, California

UPDATES FROM THE COMMUNICATIONS, EDUCATION, AND BEHAVIORAL STUDIES BRANCH

The following article by CEBSB staff member Ije Agulefo first appeared in the Spring 2010 issue of the Northeastern Spotlight, the newsletter of the New Jersey Medical School Global Tuberculosis Institute. It is reprinted here in its entirety.

Crisis and Emergency Risk Communication: What TB Programs Need to Know

Crisis and emergency risk communication (also known as CERC) combines the urgency of disaster communication with the need to communicate risks, benefits, and needed action to stakeholders, healthcare providers, media, and the general public. CERC differs from risk communication in that:

- Communication decisions on how to respond to the crisis must be made within a short time constraint;
- These decisions may be irreversible;
- Outcomes of the decision may be uncertain; and
- Decisions may need to be made based on less than perfect or incomplete information.

Overall, CERC can minimize some of the harmful human behaviors that are known to arise during a crisis.

How can TB programs use CERC?
When people are faced with a crisis or emergency situation, they take in information differently, process information differently, and act on information differently. CERC principles can be extremely useful to TB programs during a TB outbreak or high profile event. When an outbreak occurs, there is often a sense of panic, fear, confusion, anxiety, and helplessness. Using CERC principles to disseminate information can help the public cope and instill a sense of empowerment within the community. Feeling empowered to take action reduces the likelihood of feeling victimized and alleviates fear. The use of an "action message" can provide people with the feeling that they can take steps to improve a situation. During a TB outbreak, effective communication provides information on useful resources for those affected. For example, during a TB outbreak, providing information on local sites to go for TB testing is a useful action message.

Five CERC principles to communicate messages successfully during a crisis or TB outbreak:

- **Develop a solid communication plan.** Your TB program's outbreak communication plan should be fully integrated into the overall program's emergency response plan. This plan should address all of the roles, responsibilities, and resources involved in providing information to the public, media, and partners during a TB outbreak. It should

include such elements as a signed endorsement from the program's director, regional and local media contact, and staff responsibilities. The communication plan should be seen as a resource of information. In general, the public tends to judge the success of a response by the success of its communication plan during a crisis.

- **Be the first source of information.** It is important for the TB program to be the first source of information during a TB outbreak. The public sees the speed of useful information as a marker of preparedness. In addition, when people seek information about something unknown, the first message they receive tends to carry the most credibility. Therefore, it is important for the TB program to be the first source of information. For example, if your TB program's first message is, "Only people who spent extended time with the student with TB are at risk of developing the disease. We are contacting those persons to ensure they are tested," the audience will remember this message and accept it. Later, if a subsequent message from another source says, "Everyone should be tested for TB," the audience will compare the second message to the first message. They are more likely to accept the first one because it is from a credible source and it was the first message received.

- **Express empathy early.** Empathy is the ability to understand what another human being is feeling. Research has shown that it should be expressed within the first 30 seconds of message delivery. This is a very challenging but critical step in crisis communication. Empathy shows sincerity to the public, and also helps the public hear the message. For example: "We recognize that you are anxious about the recent TB outbreak and we understand your concern. We are available to answer questions that you may have about the situation."

- **Show competence and expertise.** Research shows that people believe that individuals in professional positions within respected organizations are experienced and competent. It is important to maintain the highest level of expertise as a way of fostering trust. When a TB outbreak occurs, provide necessary information to ensure the affected audience understands the situation. For example, provide the public with information on how TB is transmitted along with the signs and symptoms of the disease.

- **Remain honest and open.** In many cases, when information is being disseminated following an outbreak, everyone assumes that some information is being held back. For this reason, it is best to let the public, stakeholders, and the media know that they will be updated with information as it becomes available. For example, "Currently, we do not know if there are others who may have been infected or have TB disease. We will continue to update you as we learn more."

Message planning

Both the content as well as the method of message delivery during an outbreak are extremely important. Dissemination of appropriate messages to the community helps to reduce fear and anxiety. When developing CERC messages, it is critical that

- Affected audiences be identified;
- Key messages be developed with supporting facts included; and
- Effective dissemination channels be used.

When people are faced with a crisis, they want to receive messages that are accurate, helpful, timely, empathetic, short, and concise. Messages disseminated in response to a TB outbreak

should follow the STARCC principle. Messages should be:

- **S**imple
- **T**imely
- **A**ccurate
- **R**elevant
- **C**redible
- **C**onsistent

Working with the media

When a TB outbreak or high profile event occurs, it is very likely that it will generate media interest. Use the media to your advantage! The media can reach a large number of people quickly and can assist you with message dissemination. The media is attracted to messages that are convenient, simple, visual, and emotional. To assist with developing messages for the media, the key is to identify the **s**ingle **o**verriding **c**ommunication **o**bjective, also known as the **SOCO**. The components of the SOCO include:

- Key point or objective. What is the most significant point in the message?
- 3-4 facts or statistics (e.g., how many people may have been affected?)
- The primary and secondary audience. Who are the populations of interest?
- One key message (e.g., the patient is currently undergoing treatment.)
- Contact information. Who can be reached for more information?

A SOCO worksheet is available in the publication: "Forging Partnerships to Eliminate Tuberculosis: A Guide and Toolkit" on the CDC website at http://www.cdc.gov/tb/publications/guidestoolkits/forge/default.htm. View a sample single overriding communications objective (SOCO) worksheet (MS Word - 36kb)[1]

A spokesperson to represent your TB program should be identified to interact with the media during an outbreak. Having a spokesperson gives an identity to your program, and shows competence and expertise. Your spokesperson should be well trained, have the ability to effectively connect with the audience, and communicate accurate and useful information about an outbreak. It is important to include your spokesperson in message development. This helps to ensure that he or she "owns" the statements and will help convey confidence, believability, and trust. Your spokesperson should not only know the needs of the TB program, but should also show empathy to the affected audience. Your spokesperson should not: be defensive, express personal opinions, over-reassure nor use humor, jargon, one-liners, or clichés.

Partnerships and communication

Joining forces with your partners creates an opportunity to foster respect, trust, and commitment with your target audiences. In crisis communication planning, it is important to identify and involve your partners and stakeholders to gain access to their skills and resources. Partners can assist with developing messages that are appropriate, sustainable, and effective for the audience. When a TB outbreak occurs, providing timely and accurate information to key internal and external partners and stakeholders helps to strengthen existing relationships. To learn more about partnership planning, access the publication: "Forging Partnerships to Eliminate Tuberculosis: A Guide and Toolkit" on the CDC website at http://www.cdc.gov/tb/publications/guidestoolkits/forge/default.htm and view Planning with Partners: Moving from Goals to Effective Action Checklist (MS Word - 34kb)[2]

Evaluation of messages

The key to communicating effectively during an outbreak is to evaluate messages at various stages of dissemination. Seeking audience feedback is useful to refine the communication strategy, and to improve the effectiveness of the messages.

The evaluation methods that should be used to evaluate risk communication messages are as follows:

- **Formative evaluation** is used to "pilot-test" messages prior to dissemination to the target audience. After messages are developed, share them with your internal and external partners to determine if the messages are clear and comprehensive. Feedback obtained can then be used to revise and improve the messages before they are disseminated widely.

- **Process evaluation** examines the procedures and tasks involved in implementing an activity, such as the channels of delivery and the number of messages disseminated. After the messages are disseminated, it is important to monitor the methods of message delivery (e.g., on-line, print distribution). In addition, also determine the number of materials distributed (e.g., number of factsheets disseminated to the public, number of public inquiries received as a result of the message).

- **Outcome evaluation** assesses the effectiveness of the messages being disseminated. The effectiveness can be determined by changes in the behavior of the target audience as a result of the messages received. Outcome evaluation can obtain descriptive data and show the immediate effects of the messages disseminated. For example, after disseminating messages following an outbreak, obtain data on the affected audience coming in for testing.

- **Impact evaluation** focuses on the long term effects of the messages being disseminated during an outbreak, such as number of persons with TB infection or TB disease identified. Impact evaluation is harder to accomplish because it is difficult to separate the impact of disseminated messages on the audience from the effects of other activities.

To learn more about evaluation of risk communication programs, view the evaluation primer on health risk communication programs on the CDC website at: http://www.atsdr.cdc.gov/risk/evalprimer/types.html.[3]

—Submitted by Ijeoma Agulefo, MPH
Div of TB Elimination

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Invitation to Participate in Website Usability Studies

The Communications, Education, and Behavioral Studies Branch of DTBE would like to invite you to participate in a usability study of a CDC

website. The studies will be conducted at two conferences in 2010:
The National TB Conference, June 21-24 (Link https://www.signup4.net/public/ap.aspx?EID=2010771E&OID=167), and
The 10th annual TB Education and Training Network (TB ETN) Conference, August 10-12, 2010. (Link http://www.cdc.gov/tb/education/tbetn/conference.htm)

Your feedback will be used to improve the usability of the website. If you would like to participate in either of these studies while attending the conferences, please e-mail **Sharon McAleer** at zoo0@cdc.gov to schedule a time to participate. We greatly appreciate your time and assistance.

—Submitted by Sharon Mc Aleer, MISM, CUA
Div of TB Elimination

UPDATES FROM THE MYCOBACTERIOLOGY LABORATORY BRANCH

World TB Day Laboratory Tour

To celebrate World TB Day and to showcase the contribution of the laboratory in TB control and elimination efforts, DTBE's Mycobacteriology Lab Branch hosted a tour of the CDC TB lab at the Roybal Campus on March 24. Tour capacity was reached, and 22 people participated in a tour to see the lab's set up and layout, and to observe how the lab works.

Visitors were able to walk into the carpeted office areas, and then peer through windows into the various biosafety level (BSL)-2 and BSL-3 labs where they observed CDC scientists, both applied research and reference laboratorians, at work. The attendees were split into two groups, and Ray Butler and Mitch Yakrus served as their tour guides, explaining procedures and fielding the many questions that arose during the tour. The audience consisted of staff from a wide variety of CDC offices and centers.

Participants showed an interest in a number of topics, ranging from the historical work done at the CDC TB laboratory to safety protocols to current reference testing and research. Most tour members did not come from a laboratory background and many had never toured a laboratory before. All were impressed with the level of safety protocols that are in place in the TB lab, from the respiratory protection plan the employees must undergo, to the negative airflow that is constantly monitored, and even the level of safety that is imposed on the transport and receipt of specimens. They were also equally impressed with the level of expertise and the critically important work that CDC TB laboratorians perform. Visitors came away with a better understanding of the laboratory and its integral function in working towards the goal of elimination of tuberculosis.

—Submitted by Frances Tyrrell, MPH, MT
Div of TB Elimination

MLB Sponsors Webinars for Public Health TB Labs

The Laboratory Capacity Activity (LCA) of the Mycobacteriology Laboratory Branch (MLB) at CDC has developed a webinar series for state and local public health TB laboratories throughout the United States. The purpose of the webinar series is to provide a forum through which MLB can update public health TB labs on new services provided by the Branch, such as the new service for molecular detection of drug resistance; to showcase new information, guidelines, and recommendations that relate to TB lab testing; and to provide a forum for discussion, questions and answers, and the sharing of best practices among public health TB labs in the United States.

The second webinar in the series was recently held, and over 70 laboratorians and other public health TB personnel participated. The webinar followed a "Town Hall" format, and featured four guest speakers. Laboratorians Julie Tans-Kersten from the Wisconsin State Laboratory of Hygiene, Gary Budnick from the Connecticut Public Health Lab, Yvette Vergnetti from the Alaska State Public Health Lab, and Lisa Dettinger from the Pennsylvania BOH Laboratory joined the LCA as expert panelists. Entitled "Examples from the Field: Challenges and Successes for Quality TB Specimens," the webinar focused on the efforts that have proven successful in improving the quality of specimens for TB testing, reducing turnaround times for specimen receipt, and cost-effective measures for obtaining specimens in large states and jurisdictions. The guest panelists provided insights into how their respective laboratories, in collaboration with TB control programs, have resolved problems regarding these issues. The Town Hall format allowed for an informal atmosphere that encouraged questions and suggestions.

The webinar and its format were well received by the participating audience. The Lab Capacity Activity of the MLB plans on incorporating the Town Hall format into more webinars in the future.

—Reported by Frances Tyrrell, MPH, MT
Div of TB Elimination

UPDATE FROM THE SURVEILLANCE, EPIDEMIOLOGY, AND OUTBREAK INVESTIGATIONS BRANCH

TBESC: Preparing for the Future

Planning for the next 10 years of the Tuberculosis Epidemiologic Studies Consortium (TBESC) is well underway. The members of DTBE's Epidemiology Team are implementing a timeline created in 2008 that details the steps required to create the new TBESC. The current TBESC, created in 2001, is comprised of 16 geographically diverse sites consisting of academic institutions, health departments, hospitals, and for-profit as well as not-for-profit organizations. These sites have collaborated with CDC on a total of 32 research projects on topics such as TB prevention in the foreign-born, TB mortality, and TB in African Americans. Although all the studies performed have contributed to our understanding of TB epidemiology, the studies with the greatest impact have been those that involved most or all of the TBESC sites. Therefore, the new TBESC will consist of one main research project that will be studied by all TBESC sites.

The process of developing the focus of research for the new consortium has been an extensive one. National and international TB experts were invited to join a Strategic Planning Workgroup (SPWG) to develop a focus of research for the new TBESC. Prior to the first meeting, a broad list of concepts was prepared with widespread

input from the TB community in the United States. The first meeting was then used to discuss these 12 general topics related to TB research, and to narrow that list to six topics.

The topics were further examined in the second meeting and ultimately narrowed to three potential areas for research. These areas were developed into research plans; the third meeting was used to discuss these plans and decide on the final focus for research. Because the application process is an open competition, specifics of the intervention will be disclosed to all potential applicants when the statement of work is released. However, throughout the discussions in the three meetings, the SPWG reiterated that in order to eliminate TB in the United States, focus must be placed on reducing latent tuberculosis infection (LTBI). Therefore, the new TBESC will work on some aspect of research related to LTBI.

The work of preparing for the new consortium has only increased following the selection of the focus of research for the new consortium. The epidemiology team staff members have traveled to several health departments around the country to talk with TB controllers and health department staff about how LTBI care is performed at their site. These visits have illuminated variations between sites in their methods of providing care. Sites visited were chosen to geographically represent the United States as a whole, and to provide background on LTBI care in a variety of patient populations.

Although much progress has been made in planning for the new TBESC, there is much left to be done. The statement of work detailing the research to be performed by the new consortium is undergoing final edits, and should be available on the Federal Business Opportunities website in the summer of 2010. Applicants will have 60 days to draft a proposal to submit to CDC to be considered as a site. In addition, the Epidemiology Team is already considering and planning a data entry system that will best suit the needs of the new consortium. Dr. Denise Garrett, TBESC project officer, stated, "We are applying our experience gained from the last 10 years in planning for a new, state-of-the-art TBESC. Our goal for the next 10 years is to be performing cutting-edge research to make TBESC the reference for TB and LTBI epidemiologic research in the United States."

—Reported by Suzanne Beavers, MD
Div of TB Elimination

NEW CDC PUBLICATIONS

Cegielski P. Extensively drug-resistant tuberculosis: "There must be some kind of way out of here." *Clin Infect Dis* 2010 May 15; 50 Suppl 3: S195-200.

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Vernon A. A trial involving HIV-tuberculosis in India: the minute particulars. *Am J Respir Crit Care Med 2010*;181:652-4.

PERSONNEL NOTES

Heather Alexander, PhD, left IRPB and DTBE on April 9 for a new position as TB/OI Unit Lead for the International Laboratory Branch, Global AIDS Program. In her new position, Heather will continue to collaborate with IRPB and other partners to assess the Cepheid Xpert MTB/RIF nucleic acid amplification test as part of a

diagnostic procedure for intensified TB case finding among HIV-infected individuals in Kenya.

Heather completed her PhD in molecular microbiology in 2004 at Emory University with a dissertation focused on *Neisseria meningitidis* pathogenesis. After graduate school, she joined the HHS Emerging Leaders Program (ELP), and first came to IRPB in January 2005 through one of her ELP rotations. IRPB was fortunate in that her professional interests coincided with IRPB's activities of evaluating and implementing modern technologies to improve TB diagnostics. Heather joined IRPB's staff in 2005 as an ORISE and CDC Foundation Fellow; later she became a Senior Service Fellow, and eventually was hired as a full-time employee.

During her 5 years in IRPB, Heather has contributed to and led several projects focused on TB diagnostics. She played a major role in compiling the evidence for the WHO guidelines on use of liquid culture for TB diagnosis in low-resource settings. In collaboration with FIND and other partners, she led a demonstration project to implement and evaluate the MGIT 960 system in four countries (Russia, the Philippines, Nepal, and Uzbekistan). In another collaboration, Heather worked with the Tropical Disease Foundation in Manila to implement and evaluate the Hain MTBDR*plus* line probe assay. Thanks in part to her activities, these TB programs currently use these diagnostic tests in their routine daily practice.

In addition, she has been working with MLB to compare results of the MTBDR*plus* and MTBDR*sl* line probe assays with drug-susceptibility test results from over 1,000 archived MDR TB isolates here in Atlanta. She also worked with CHSRB and with DTBE's program in Botswana in evaluating the QuantiFERON assay among HIV-infected persons in that country. She also led the development and pilot testing of a StarLIMS-based electronic laboratory information system for TB reference laboratories in Russia. It has been a pleasure and privilege to work with Heather, and we wish her all the best in her new position!

Brian Baker, MD, will be the new EIS Officer for the Surveillance, Epidemiology, and Outbreak Investigations Branch (SEOIB), starting in July. Brian is a graduate of the University of California-Berkeley and the University of California-San Francisco School of Medicine. He extended medical school to work at the Institute for OneWorld Health, helping plan a control program for visceral leishmaniasis in India. He also spent 6 months living in Tanzania, working for the Axios Foundation on HIV prevention efforts. He currently lives in New York City, where he is completing his final year of Emergency Medicine training at New York University and Bellevue Hospitals.

Joseph (Sean) Cavanaugh, MD, has accepted a position as a Commissioned Corp Medical Officer in IRPB. Sean will officially join the Branch immediately following completion of the Epidemic Intelligence Service (EIS) program this summer. Sean finished medical school at Albert Einstein College of Medicine in the Bronx, New York, and completed his internship and residency at the New York University Internal Medicine/Primary Care Program. He worked for a year as a chief resident for the program, with duties at the Manhattan VA NY Medical Center and Bellevue Hospital. In 2001, he was hired as a staff member at the Manhattan VA NY Medical Center and as an associate program director for the Internal Medicine residency program. His duties included inpatient and outpatient care, supervising medical students and residents, and developing the training curriculum for medical residents. Also beginning in 2001, he worked part-time providing primary and urgent care at Odyssey House, an inpatient drug rehabilitation facility in New York City. In 2008, Sean left New York City to join the EIS at CDC and was assigned to IRPB, DTBE. During the past 2

years, he has helped develop protocols for intensive case-finding in Africa, TB-HIV surveillance in the prison system in Botswana, and assessing the association between TB and diabetes in the Western Pacific.

Michael Iademarco, MD, has been selected as the next Chief, Mycobacteriology Laboratory Branch, DTBE. We expect his arrival in Atlanta this summer. Since September 2006, Michael has served as the HHS Health Attaché at the U.S. Embassy in Vietnam, where he has coordinated policy for U.S. Government health-related cooperation and has been the in-country representative for the Office of the Secretary. He holds the rank of Captain (O-6) in the Commissioned Corps, U.S. Public Health Service, and served as the Associate Director for Science, DTBE, from early 2001 until June 2006. Michael joined CDC/DTBE as a medical epidemiologist in 1998, in what at the time was our International Activity. From 1993 until 1998, he was on the faculty of Washington University School of Medicine as a physician-scientist in the Pulmonary and Critical Care Division, where he successfully secured funding from the National Institutes of Health for laboratory-based research. During that time he gained proficiency and expertise in laboratory-based sciences and research in pulmonary diseases. While working in DTBE, Michael served on various World Health Organization (WHO) workgroups, including the Stop TB Partnership Workgroup on Vaccines, and served 7 years as a member of the WHO Western Pacific Region Office Technical Advisory Group for Tuberculosis. He holds an adjunct faculty appointment in both of Emory University's School of Medicine and Rollins School of Public Health, and annually serves as an attending physician at the Atlanta Veterans Administration Medical Center Medical Intensive Care Unit. Michael brings to DTBE important knowledge and a skill set which is complimentary to that of the current MLB leadership and staff.

Ekaterina (Katya) Kurbatova, MD, PhD, MPH, has accepted a position as a Medical Epidemiologist with IRPB's MDR-TB team. Dr. Kurbatova received her MD (1998) and PhD (2006) degrees from Samara State Medical University in Russia and an MPH in Epidemiology (2004) from the Emory Rollins School of Public Health. She served as a research consultant to the World Health Organization's tuberculosis program in Russia in 2006-2007. Since 2007, her primary position has been as a Senior Coordinator of Research Projects in Emory's School of Medicine Division of Infectious Diseases. In addition, she has coordinated four Russian sites' participation in CDC/DTBE's Preserving Effective Tuberculosis Treatment Study (PETTS), a multinational epidemiological study of multidrug-resistant (MDR) TB being carried out in nine countries (Estonia, Latvia, Peru, Philippines, Russia, South Africa, South Korea, Taiwan, and Thailand). Dr Kurbatova is the author or co-author of over 20 peer-reviewed journal publications.

Michelle Presswood, CAP (Certified Administrative Professional), has joined DTBE's Field Services and Evaluation Branch (FSEB). She has over 15 years' experience in the administrative field. She began working in 1994 as a clerical aide in Des Moines, Iowa, then served as the Development Operations Specialist at Oakridge Neighborhood, where she assisted the Director of Development. In 2000, she opened her own business, Presswood Creations. In 2003, she was hired as a part-time outreach worker for the City of Des Moines, where she provided case management to low-income families and elderly persons.

In March 2004, Michelle relocated to Georgia and was hired by OfficeTeam, which provides temporary clerical assistance throughout Atlanta. In October 2004, she was hired by the Housing Authority of DeKalb County (HADC) as an Administrative Assistant to the Director of Housing Choice Programs, and in 2006, she was promoted to Executive Administrative Assistant.

In 2009 she left HADC and became a contractor for National Associates, Inc., working first as an Administrative Assistant to the Director of the Strategic Programs Division at the Atlanta Human Resources Center (AHRC), then in a temporary administrative assignment at CDC's Procurement and Grants Office. Michelle is now serving as the Administrative Assistant for FSEB. Michelle has an Associate in Science degree in Human Services from Des Moines Area Community College, and in June 2009, she received her Certified Administrative Professional rating from the International Association of Administrative Professionals. Michelle enjoys traveling and spending time with her family

Sandy Price is the recipient of the DTBE Director's Recognition Award for the second quarter of 2010. Sandy is being recognized for her outstanding commitment and work during the provision of technical assistance to all reporting areas as they transitioned from the TIMS software to the different PHIN/NEDSS-compliant options — such as the eRVCT, the NBS TB PAM, and the PHIN TB message — that are needed for the exchange of TB surveillance data among these diverse interoperable electronic systems. In addition, she closely monitored and tracked the progress of the 2009 provisional case count by providing regular feedback to DTBE senior staff and the state TB community, and by maintaining appropriate and effective communication links with DTBE staff who were directly or indirectly involved in this transition, particularly the DTBE Program Consultants regarding resource needs and management of problems. Sandy is recognized for maintaining ongoing formal and informal relationships with key core project constituencies in order to leverage a broad spectrum of CDC and state-based IT resources, for promoting confidence in project efforts, and for advancing ongoing project goals. All this work became critical to DTBE's ability to analyze surveillance data in time for the annual preliminary report in the MMWR issue commemorating World TB Day 2010. Very importantly, this background work also enabled us to identify early in 2010 the significant decrease in reported 2009 TB cases. We are grateful to Sandy for her hard work and excellent performance, and congratulate her for receiving the Director's Recognition Award.

Paul Regan has been selected for the public health advisor position in Richmond, Virginia; his report date is July 4, 2010. His duties will include providing assistance with the technical aspects of TB prevention and control, contact investigations, and a variety of TB control program and administrative activities for the state. Paul is currently assigned to the Mississippi State Dept. of Health as Director of the Hinds County TB Clinic in Jackson, MS. In this capacity, Paul handles various administrative and managerial duties including staff development, program development, budgets, contracts, and special projects. While in Mississippi, Paul was selected for the International Experience and Technical Assistance (IETA) Program. This program is competitively offered through the Office of Global Health (OGH) and gave Paul the opportunity to travel to South Africa and provide technical assistance to the Global AIDS Program (GAP) in remote locations throughout South Africa.

Prior to Mississippi, Paul was assigned to the Florida Bureau of TB and Refugee Health in Tallahassee, Florida. While there, he was responsible for coordinating statewide interjurisdictional transfers of TB patients. He also served as Area Manager of Areas 1 and 2A, Area Coordinator for Area 5, and Continuity of Operations Program (COOP) coordinator for the Bureau.

Paul began his CDC DTBE career in the Alabama Dept. of Health where he supported local staff and performed disease intervention activities in an eight-county area. He had division-level projects which included export, analysis, and presentation of epidemiologic data from each of Alabama's 11 public health areas.

Paul also assisted with an Epi-Aide in Bayou La Batre.

During his career with DTBE, Paul has volunteered for several temporary duty (TDY) assignments. In addition to his TDY assignments in Bayou Le Batre, Alabama, and in South Africa, he also served in New Orleans, Louisiana (post-Katrina); Fort Wayne, Indiana; Kosciusko County, Indiana; and Providence, Rhode Island.

Before coming to DTBE, Paul worked for the New Orleans Office of Public Health in the TB control program as a Disease Intervention Specialist II. His assignments included conducting contact investigations, performing case management, and conducting TB health and education seminars. Prior to that, Paul worked for the Louisiana Department of Corrections, Felony Probation and Parole Division as a Special Agent serving on the Tactical Response Team.

Taraz Samandari, MD, PhD, has been selected as the new Program Strengthening and Epidemiology Team Leader for IRPB. Dr. Samandari returned to Atlanta in mid-2009 after a 6-year tour in Botswana, where he directed CDC's TB-HIV Research Division (BOTUSA). He headed a 40-person team in the conduct of a double-blind, randomized, placebo-controlled clinical trial which determined that, in addition to antiretroviral therapy, continuous isoniazid prophylaxis is far superior to standard 6-month prophylaxis in reducing the risk of TB in tuberculin skin test-positive HIV-infected persons. Additionally, he participated in a variety of operational research activities and served in an advisory capacity to Botswana's Ministry of Health. Prior to joining IRPB in 2003, he served as an EIS Officer with CDC's Division of Viral Hepatitis. Prior to joining CDC, Taraz was an Assistant Professor in internal medicine and infectious diseases at the University of Maryland's School of Medicine. During that time he analyzed the human cellular immune response to vaccines.

CALENDAR OF EVENTS

June 6-9, 2010
2010 APHL Annual Meeting and Fourth State Environmental Laboratory Conference
Cincinnati, OH
Association of Public Health Laboratories (APHL)

June 21-24, 2010
2010 National TB Conference
Atlanta, GA
National Tuberculosis Conference (NTC)

June 29-30, 2010
ACET Meeting
Atlanta, GA
Division of TB Elimination (DTBE)

July 11-14, 2010
International Conference on Emerging Infectious Diseases (ICEID)
Atlanta, GA

August 10-12, 2010
10th Annual TB ETN Conference and 2nd Annual TB PEN Conference
"TB Education, Training, and Evaluation: Fitting the Pieces Together"
Atlanta, GA
TB Education and Training Network and TB Program Evaluation Network
http://www.cdc.gov/tb/education/tbetn/conference.htm

November 11-15, 2020
41st UNION World Conference on Lung Health
Berlin, Germany
IUATLD